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OCT 17 2007

Docket No. 180.00120101

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Zhao Yi WANG ) Group Art Unit: 1647  
 )  
 Serial No.: 10/591,199 ) Examiner: Shulamith H. Shafer  
 Confirmation No.: 4302 )  
 )  
 Filed: August 30, 2006 )  
 For: ESTROGEN RECEPTORS AND METHODS OF USE

FACSIMILE TRANSMISSION TO THE PTO

Mail Stop Missing Parts  
 Commissioner for Patents  
 P.O. Box 1450  
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The following papers are being transmitted to the Patent and Trademark Office by facsimile transmission: Request for Corrected Filing Receipt (2 pgs.); copy of page 1 of the Filing Receipt (1 pg); copy of previously submitted Application Data Sheet (2 pgs); copy of previously submitted Declaration (3 pgs); and copy of page one of the filed application (1 pg).

X Small Entity Status is entitled to be asserted in the above-identified application.

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Mueting, Raasch & Gebhardt, P.A.  
 Customer Number: 26813

October 17, 2007  
 Date

By: David L. Provence  
 David L. Provence  
 Reg. No. 43,022  
 Direct Dial (612)305-1005

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October 17, 2007  
 Date

Signature: Deb Schurmann  
 Name: Deb Schurmann

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Applicant(s): Zhao Yi WANG ) Group Art Unit: 1647

Serial No.: 10/591,199 ) Examiner: Shulamith H. Shafer  
Confirmation No.: 4302 )  
Filed: August 30, 2006 )

For: ESTROGEN RECEPTORS AND METHODS OF USE

**REQUEST FOR CORRECTED FILING RECEIPT**

Mail Stop Missing Parts  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Upon review of the Filing Receipt received from the U.S. Patent and Trademark Office in connection with the above-identified application, the following error was noted.

Under "Domestic Priority data as claimed by applicant" the provisional application number and filing date on the second line is incorrect. Please remove 60/522,067 filed on August 10, 2004 and replace it with 60/552,067, filed on March 10, 2004. A copy of the Filing Receipt with this correction marked is enclosed. Also enclosed is a copy of the previously submitted Application Data Sheet, a copy of the previously submitted Declaration and a copy of the first page of the filed application, all of which show the correct priority data. Applicant respectfully requests a corrected Filing Receipt.

**Request for Corrected Filing Receipt**

Applicant(s): Zhao Yi Wang

Serial No.: 10/591,199

Confirmation No.: 4302

Filed: August 30, 2006

For: ESTROGEN RECEPTORS AND METHODS OF USE**RECEIVED  
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If the Examiner has any questions regarding this submission, please contact  
Applicant's Representative at the below-listed telephone number.

**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper  
is being transmitted by facsimile in accordance  
with 37 CFR §1.6(d) to the Patent and  
Trademark Office, addressed to: Mail Stop  
Missing Parts, Commissioner for Patents, P.O.  
Box 1450, Alexandria, VA 22313-1450, on this  
17<sup>th</sup> day of October, 2007, at  
10:53am (Central Time).

By: Deb Schurman  
Name: Deb Schurman

Date

October 17, 2007

Respectfully submitted  
By  
Mueting, Raasch & Gebhardt, P.A.  
P.O. Box 581415  
Minneapolis, MN 55458-1415  
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## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371(C) DATE	ART UNIT	FIL FEE RECD	ATTY.DOCKET NO	TOT CLMS	IND CLMS
10/591,199	06/13/2007	1646	2240	180.00120101	52	11

26813  
MUETING, RAASCH & GEBHARDT, P.A.  
P.O. BOX 581415  
MINNEAPOLIS, MN 55458

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CONFIRMATION NO. 4302  
FILING RECEIPT  
  
\*OC000000025130325\*

Date Mailed: 08/01/2007

Receipt is acknowledged of this nonprovisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Zhao Yi Wang, Bellevue, NE;

Power of Attorney: The patent practitioners associated with Customer Number 26813.

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/US05/07857 03/10/2005  
which claims benefit of 60/522,067 08/10/2004 *60/552,067, filed on March 10,*  
and claims benefit of 60/643,469 01/13/2005 *2004*

## Foreign Applications

If Required, Foreign Filing License Granted: 07/31/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/591,199**

Projected Publication Date: 11/08/2007

Non-Publication Request: No

Early Publication Request: No

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AUG 06 2007

## APPLICATION DATA SHEET

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## APPLICATION INFORMATION

Application Type:: REGULAR  
 Subject Matter:: UTILITY  
 CD-ROM or CD-R?:: NONE  
 Sequence Submission?:: PAPER  
 Computer Readable Form (CRF)?:: YES  
 Number of Copies of CRF:: 1  
 Title:: ESTROGEN RECEPTORS AND  
       METHODS OF USE  
 Attorney Docket Number:: 180.00120101  
 Total Drawing Sheets:: 26  
 Licensed US Govt. Agency:: Department of Health and Human  
       Services  
 Contract or Grant Numbers:: CA84328

## INVENTOR INFORMATION

Applicant Authority Type:: INVENTOR  
 Primary Citizenship Country:: US  
 Status:: FULL CAPACITY  
 Given Name:: Zhao  
 Middle Name:: Yi  
 Family Name:: WANG  
 City of Residence:: Bellevue  
 State or Province of Residence:: NE  
 Country of Residence:: US  
 Street of Mailing Address:: 10005 South 11th Street  
 City of Mailing Address:: Bellevue  
 State or Province of Mailing Address:: NE  
 Country of Mailing Address:: US  
 Postal or Zip Code of Mailing Address:: 68123

## CORRESPONDENCE INFORMATION

Correspondence Customer Number:: 26813

## REPRESENTATIVE INFORMATION

Representative Customer Number:: 26813

## DOMESTIC PRIORITY INFORMATION

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	National Stage of	PCT/US05/007857	03/10/05
PCT/US05/007857	119(e) of	60/552,067	03/10/04
PCT/US05/007857	119(e) of	60/643,469	01/13/05

## FOREIGN PRIORITY INFORMATION

**COPY**

## ASSIGNMENT INFORMATION

Assignee Name:: Creighton University  
Street of Mailing Address:: 2500 California Plaza  
City of Mailing Address:: Omaha  
State or Province of Mailing Address:: NE  
Country of Mailing Address:: US  
Postal or Zip Code of Mailing Address:: 68178

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Docket No: 180.00120101

## DECLARATION

I, Zhao Yi Wang, the sole inventor of the invention claimed, declare that: (1) my citizenship and residence/mailing address are indicated below; (2) I have reviewed and understand the contents of the specification identified below, including the claims, as amended by any amendment specifically referred to herein, (3) I believe that I am the original and first inventor of the subject matter in

**COPY**

Serial No.: 10/591,199

## ESTROGEN RECEPTORS AND METHODS OF USE

International Filing Date: 10 March 2005

described and claimed therein and for which a patent is sought; and (4) I hereby acknowledge my duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to the patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate listed below, or §365(a) of any PCT international application which designates at least one country other than the United States of America listed below, and have also identified below any foreign application for patent or inventor's certificate, or any PCT international application having a filing date before that of the application on the basis of which priority is claimed:

a. X no such applications have been filed.  
b.    such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC §119(a)-(d), §365(a), and/or §365(b)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

ALL FOREIGN APPLICATIONS, IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

\* Title 37, Code of Federal Regulations, §1.56 is reproduced on the attached page.

**Declaration**

Serial No. 10/591,199

Confirmation No. 4302

Filing Date: 10 March 2005

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I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

a.    no such applications have been filed.  
 b. X such applications have been filed as follows:

**COPY**

PROVISIONAL APPLICATION(S), IF ANY, UNDER 35 USC §119(e)	
APPLICATION NUMBER	DATE OF FILING (day, month, year)
60/552,067	10 March 2004
60/643,469	13 January 2005

I hereby claim the benefit under Title 35, United States Code, §120 of any United States applications or §365(c) of any PCT international application(s) designating the United States of America, listed below.

a. X no such applications have been filed.  
 b.    such applications have been filed as follows:

APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)

Insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

The undersigned declares further that all statements made herein of his/her own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Wherefore, I pray that Letters Patent be granted to me for the invention described and claimed in the specification identified above and I hereby subscribe my name to the foregoing specification, claims, and Declaration on the date indicated below.

Name: Zhao Yi Wang

Citizenship: US

Address: 10005 South 11<sup>th</sup> Street, Bellevue, NE 68123, US

5/11/07

Date

**Declaration**

Serial No. 10/591,199

Confirmation No. 4302

Filing Date: 10 March 2005

Title: ESTROGEN RECEPTORS AND METHODS OF USE

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**COPY****§ 1.56 Duty to disclose information material to patentability.**

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

(e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all information known to the person to be material to patentability, as defined in paragraph (b) of this section, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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Docket No. 180.00120201

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## ESTROGEN RECEPTORS AND METHODS OF USE

## CONTINUING APPLICATION DATA

**COPY**

This application claims the benefit of U.S. Provisional Application Serial No. 60/552,067, filed 10 March 2004, and 60/643,469, filed 13 January 10 2005, each of which is incorporated by reference herein.

## Government Funding

The invention described herein was developed with support from the 15 Department of Health and Human Services under Grant Number CA84328. The U.S. Government has certain rights in the invention.

## BACKGROUND OF THE INVENTION

20 Estrogen is a generic term for steroid compounds that are formed in the ovary, the testis, and possibly the adrenal cortex. Examples of estrogens and compounds having estrogen activity include diethylstilbestrol, fosfestrol, hexestrol, polyestradiol phosphate, broparoestrol, chlorotrianisene, dienestrol, diethylstilbestrol, methestrol, colpormon, equilenin, equilin, estradiol, estriol, 25 estrone, ethinyl estradiol, mestranol, mexestrol, quinestradiol and quinestrol. Estrogens regulate diverse physiological processes in reproductive tissues and in 30 mammary, cardiovascular, bone, liver, and brain tissues. Estrogens are also used in oral contraceptives. Other uses for estrogens include the relief of the discomforts of menopause, inhibition of lactation, and treatment of osteoporosis, threatened abortion, and various functional ovarian disorders. Anti-estrogens are used to treat metastatic breast carcinoma and advanced prostate cancer.